



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,145	10/11/2001	Andrew J. Wardrop	10001-31297	2336

22930 7590 11/15/2006
HOWREY LLP
C/O IP DOCKETING DEPARTMENT
2941 FAIRVIEW PARK DR, SUITE 200
FALLS CHURCH, VA 22042-2924

EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2195

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,145

Applicant(s)

WARDROP, ANDREW J.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2195

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 3, 5 and 7-11 and 14-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In order for a claimed process to be statutory the claimed computer-related process must either A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan or B) be limited to a practical application within the technological arts and thereby producing a useful, concrete, and tangible result. The relevant portions of the updated Chapter 2106 is copied below. M.P.E.P. 2106:

a) "USEFUL RESULT"

For an invention to be "useful" it must satisfy the utility requirement of section 101. The USPTO's official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP § 2107 and *Fisher*, 421 F.3d at 1372, 76 USPQ2d at 1230 (citing the Utility Guidelines with approval for interpretation of "specific" and "substantial"). In addition, when the examiner has reason to believe that the claim is not for a practical application that produces a useful result, the claim should be rejected, thus requiring the applicant to distinguish the claim from the three 35 U.S.C. 101 judicial exceptions to patentable subject matter by specifically reciting in the claim the practical application. In such cases, statements in the specification describing a practical application may not be sufficient to satisfy the requirements for section 101 with respect to the claimed invention. Likewise, a claim that can be read so broadly as to include statutory and nonstatutory subject matter must be amended to limit the claim to a practical application. In other words, if the specification discloses a practical application of a section 101 judicial exception, but the claim is broader than the disclosure such that it does not require a practical application, then the claim must be rejected.

****>**Claims to processes that do nothing more than solve mathematical problems or manipulate abstract ideas or concepts are complex to analyze and are addressed herein. If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. *Gottschalk v. Benson*, 409 U.S. 63, 71 - 72, 175 USPQ 673, 676 (1972). Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process.

Applicant claims as written detail changing a set of values to another, i.e. timer values to a consensus timer value and thereby generating a reload value. The claims provide no concrete, useful, and tangible result. For instance, there is no claim language as to when these calculations are performed their value is used to somehow coordinate the activities of the computers. The current claim language is directed toward calculating a

Art Unit: 2195

consensus time / reload value, e.g. a mathematical algorithm. There is no practical application of this algorithm to coordinate the activities of the computer. As outlined by the provisions above, a claim that is can be read so broadly as to include statutory (via the interpretation provided by Applicant wherein these values are used to coordinate the operations of the computer) and nonstatutory subject matter (the changing of signals from one form to another form), the claims must be rejected. Therefore, the 101 rejection is maintained.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5, 7, 12-17 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by HITCH (U.S. Patent 5,861,842).

As to claim 5, HITCH teaches a method for coordinating the activities of one or more computers, comprising: capturing a first timer count value with a first timer capture register when a first PPS signal is received (GPS reference timing pulse / local timing pulse); capturing a second timer count value with a second timer capture register when a second PPS signal is received (GPS reference timing pulse / local timing pulse); generating a consensus timer count value based upon the first captured timer count value and the second captured timer count value (via calculating the phase difference of

Art Unit: 2195

the timing pulses)(col. 4, line 22 – col. 5, line 10); generating a reload value (counter value) based upon the consensus timer count value (via incrementing and decrementing the counter value based on difference) (col. 5, lines 59 – col. 6, line 7; col. 6, lines 23-55; col. 16, lines 21-23; col. 15, lines 12-21; col. 15, lines 30-col. 16, line 16); and generating an interrupt signal (alarm) based upon the reload value (col. 6, lines 43-67; col. 7, lines 1-10).

As to claims 1, 3, and 7, reference is made to a system that corresponds to the method of claim 5 and is therefore met by the rejection of claim 5 above. In addition the cited claims detail that the PPS signal is generated by a local PPS signal generator. HITCH teaches the PPS signal is generated by a local PPS signal generator (local timing pulse) (col. 5, lines 59 – col. 6, line 7; col. 6, lines 23-55; col. 16, lines 21-23; col. 15, lines 12-21; col. 15, lines 30-col. 16, line 16).

As to claims 12 and 13, HITCH teaches a computer adapted to be synchronized based on the consensus PPS value or synchronizing a computer based on the interrupt signal (via the reference signals are converted into the phase difference and then converted into a control word to correct the frequency and phase of the device thereby synchronizing the satellite and GPS system) (col. 2, lines 31-67).

As to claims 14 and 15, refer to claims 1 and 3 for rejection.

As to claims 16, 17 and 22, refer to claims 1, 7 and 12 for rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-11 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over HITCH.

As to claims 8-11, HITCH substantially discloses the invention above. However, HITCH does not explicitly state that the interrupt signal period is less than one second or approximately 10 ms. It would be obvious to one of ordinary skill in the art that since an alarm is only sent and functioned on if the difference exceeds a threshold that the threshold could relate to either one second or 10 ms.

As to claims 18-21, refer to claims 8-11 for rejection.

Response to Arguments

Applicant's arguments filed August 9, 2006 have been fully considered but they are not persuasive. Regarding the 101 arguments, the examiner refers to the 101 rejection above in maintaining the rejection. The response provided above, explains why the rejection is still maintained.

Regarding the 102 and 103 rejections, Applicant argues that the phase difference is not a PPS value, let alone a consensus PPS value. The examiner disagrees. The invention of Hitch receives multiple PPS values and converts them into a common phase difference. The interpretation of consensus PPS value based on PPS values would be either a consensus value based of the received PPS values or as Applicant is arguing a PPS value that is a function of the entered PPS values. The examiner has interpreted the consensus PPS value as a value that is a consensus of the entered PPS values and therefore the phase difference which is a difference of the entered PPS values meets this limitation. Therefore, the rejection is maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

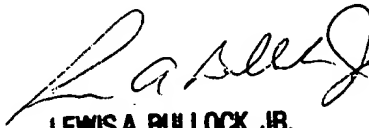
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 10, 2006


LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER